

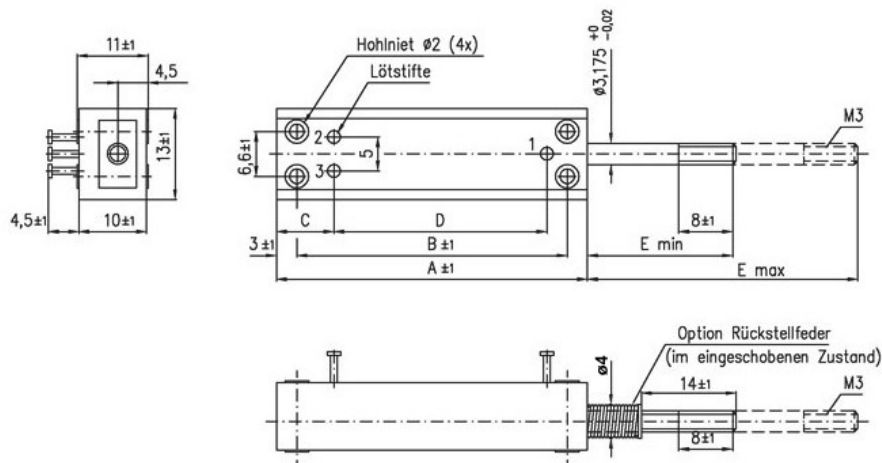
## Series CLP13 - Potentiometric Linear Transducer

- Resolution quasi infinite
- Electrical travel from 13mm to 100mm
- Small dimensions
- Resistance values 500 Ohm to 20 kOhm
- Optional with spring return

In that series a high-resolutions conductive plastic element is integrated. Because of this, the transducer offers a long lifetime and a low price.



### Drawing



Dimensions in mm					Electrical Connection
Type	CLP 13-13	CLP-13-25	CLP 13-50	CLP 13-100	<p>Diagram is equivalent to the shaft position in the above drawing</p>
A	38	51	76	127	
B	32	45	70	121	
C	8,5	8,5	8,5	8,5	
D	23,5	36,5	61,5	112,5	
E min.	19 ± 1	19 ± 1	19 ± 1	19 ± 1	
E max.	31,7 + 3	44,4 + 3	69,8 + 3	120,6 + 3	
<b>With Spring Return</b>					
E min.	30 ± 1	35 ± 1	40 ± 1	50 ± 1	
E max.	42,7 + 3	60,4 + 3	90,8 + 3	151,6 + 3	

**Tip:** At lowest strokes, and if high resolution and life expectancy are required, we recommend our inductive sensors with an internal electronic. They work with a direct d.c. voltage-input and -output.

## Series CLP13 - Potentiometric Linear Transducer

Electrical Data	CLP 13-13	CLP 13-25	CLP 13-50	CLP 13-100
Electrical Travel ( $\pm 0,5$ mm)	12.7 mm	25.4 mm	50.8 mm	101.6 mm
Resistance Values	0.5, 1, 2, 5, 10 kOhm		1, 2, 5, 10, 20 kOhm	
Resistance Tolerance, Standard	$\pm 10\%$			
Linearity Tolerance, standard	$\pm 1\%$	$\pm 0,7\%$	$\pm 0,5\%$	$\pm 0,3\%$
Linearity Tolerance, improved	$\pm 0,5\%$	$\pm 0,5\%$	$\pm 0,3\%$	$\pm 0,1\%$
Linearity Tolerance, best	--	$\pm 0,3\%$	$\pm 0,1\%$	--
Resolution	< 0,01 mm			
Maximum Power at 40°C	0,2W	0,3W	0,7W	1,2W
Maximum Operating Voltage	50 V			
Temperature Coefficient	400 ppm/K			
Initial Resistance	< 2%			
Insulation	> 1000 MOhm (at 500V DC)			
Dielectric Strength	500 Veff. / 1 min.			
Maximum Wiper Current	1 mA			
Recommended Wiper Current	< 1 $\mu$ A (voltage divider circuit)			

Mechanical Data	CLP 13-13	CLP 13-25	CLP 13-50	CLP 13-100
Mechanical Travel	12.7 + 3 mm	25.4 + 3 mm	50.8 + 3 mm	101.6 + 3 mm
Max. Operating Friction	0,4 N			
Maximim Starting Friction	< 0,5 N			< 1 N
Stopper Strength, statically	$\approx 20$			
Weight $\approx$	10 g	15 g	25 g	35 g
Bearing Push Rod	1 sleeve bearing			
Maximum Displacement Speed	5 m/s			
Average lifetime	40 mio. / with spring return 20 mio. shaft movements			
Housing Material	plastic			
Rod Material	stainless steel			
Pin Material	gold-plated pins			

Ambient Conditions	
Operating Temperature	-30 ... + 105° C (IP54 = -20 ... + 70)
Storage Temperature	-40 ... + 1251 C
Vibration	15 g / 10 ... 2000 Hz
Shock	50 g / 11 ms
Protection Class	IP40 IP54 optional (Dimensions A = A + 10 / not possible for CLP R 13-100 / operating temperature -20 ... + 70)

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## Options / Accessories / Subsequent Processing Devices

Mechanical Options	Electrical Options
<ul style="list-style-type: none"> <li>• Special shaft (length, shape, thread)</li> <li>• Spring Return (counteracting force <math>\approx 5\text{N}</math>) lower lifetime</li> <li>• Protection Class IP54 (Attention: other dimensions and oper. temp.)</li> </ul>	<ul style="list-style-type: none"> <li>• Special Resistance Values</li> <li>• Tighter Tolerances (Linearity)</li> </ul>

## Order Code

Series	<b>CLP(R)13</b>			
Stroke [mm]		<b>13</b>		<b>1% (0,5% *)</b>
		<b>25</b>		<b>0,7% (0,5% *)</b>
		<b>50</b>		<b>0,5% (0,3% *)</b>
		<b>100</b>		<b>0,3% (0,1% *)</b>
Resistance value			<b>R1k</b>	
			<b>R2k (*)</b>	
			<b>R5k</b>	
			<b>R10k</b>	
Resistance tolerance				<b>W10%</b>
Independent linearity tolerance				<b>depends on the stroke (see above)</b>

"bold print = standard option"

short-term stock types can be found on: <http://www.megatron.de/en/stocklists/linear-sensors/lagerliste.html>

(\*) = on request available for projects

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